

Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (canceled) .

Claim 2 (previously presented) : The radio communications apparatus according to claim 21, wherein said communication state detector has a reception power change detector which detects the change in reception power of the received signal.

Claim 3 (previously presented) : The radio communications apparatus according to claim 21, wherein said communication state detector has a transmitting station transmission power change detector which detects the change in transmission power of the distant station.

Claim 4 (previously presented) : The radio communications apparatus according to claim 21, wherein said communication state detector has a control state detector which detects a control state of the apparatus.

Claim 5 (previously presented): The radio communications apparatus according to claim 21, wherein said communication state detector has a local station transmission power change detector which detects a change in transmission power of the apparatus.

Claim 6 (previously presented): The radio communications apparatus according to claim 21, wherein said communication state detector has a transmission power control bit change detector which detects a change in said transmission power control bit.

Claims 7-8 (canceled).

Claim 9 (original): The radio communications apparatus according to claim 2, wherein said reception power change detector has a reception power threshold comparator which compares the reception power with a predetermined threshold.

Claim 10 (canceled).

Claim 11 (previously presented): The transmission power control method for radio communications apparatus according to claim 22, wherein said communication state detecting step has a reception power change detecting step which

detects a change in reception power, wherein said transmission power control range changing step changes the variable power step amount depending on the detected change in reception power.

Claim 12 (previously presented): The transmission power control method for radio communications apparatus according to claim 22, wherein

said communication state detecting step has a distant station transmission power change detecting step which detects a change in transmission power in the distant station and a reception power change detecting step which detects a change in the reception power, wherein

said transmission power control step range changing step changes the power step amount of the transmission power control step depending on the detected change in the transmission power in the distant station and the detected change in reception power.

Claim 13 (previously presented): The transmission power control method for radio communications apparatus according to claim 22, wherein

said communication state detecting step has a control state detecting step which detects the control state of the apparatus, wherein

said transmission power control step range changing step changes the power step amount of the transmission power control step depending on the detected control state.

Claim 14 (previously presented): A transmission power control method for radio communications apparatus according to claim 22, wherein

said communication state detecting step has a local station transmission power change detecting step which detects a change in transmission power in the apparatus and a transmission power control bit change detecting step which detects a change in the transmission power control bit, wherein

said transmission power control step range changing step changes the power step amount of the transmission power control step depending on the detected change in transmission power of the apparatus and the detected change in the transmission power control bit.

Claim 15 (original): The transmission power control method for radio communications apparatus according to claim 11 or 12, wherein

said reception power change detecting step has a reception power comparing step which compares a previous reception power with a current reception power, wherein

a change in reception power is detected based on the comparison results of the reception power comparing step.

Claim 16 (original): The transmission power control method for radio communications apparatus according to claim 11 or 12, wherein

said reception power change detecting step has a fading pitch detecting step which detects the fading pitch of reception power, wherein

a change in reception power is detected based on the detected fading pitch.

Claim 17 (original): The transmission power control method for radio communications apparatus according to claim 11 or 12, wherein

said reception power change detecting step has a reception power comparing step which compares a previous reception power with a current reception power and a fading pitch detecting step for detecting the fading pitch of reception power, wherein

a change in reception power is detected based on the comparison results of the reception power comparing step and the detected fading pitch.

Claim 18 (previously presented): A transmission power control method for radio communications apparatus according to claim 11 or 12, wherein

said reception power change detecting step has a reception power threshold comparing step for comparing the reception power with a predetermined threshold, wherein

a change in reception power is detected based on the comparison results of the reception power threshold comparing step.

Claim 19 (previously presented): A computer-readable recording medium for storing a program for use by a computer for executing the transmission power control method for the radio communications apparatus according to any one of claims 22 and 11 through 14.

Claim 20 (canceled).

Claim 21 (currently amended): A radio communications apparatus having a transmission power control feature for controlling the transmission power of said apparatus, said apparatus comprising:

a transmission power control bit change detector for extracting a transmission power control bit from a signal received from a distant station;

a communication state detector for detecting one or more of: a change in the reception power of the received signal obtained by comparing a previous reception power with a current reception power, ~~a level variation cycle of the received signal due to fading,~~ and the current transmission power of the distant station and/or said apparatus; and

a transmission power control step range changer for internally changing a variable power step amount of a transmission power control step based on both the transmission power control bit and the detected one or more of: the change in the reception power of the received signal obtained by comparing the previous reception power with the current reception power, ~~the level variation cycle of the received signal due to fading,~~ the current transmission power of the distant station, and the current transmission power of said apparatus; wherein

said apparatus internally increases or decreases a transmission power of a transmitted signal to the distant station by the changed power step amount in response to the transmission power control bit received from the distant station.

Claim 22 (currently amended): A transmission power control method for a radio communications apparatus for controlling a transmission power of the apparatus, said method comprising:

the apparatus having a transmission power control bit extraction step for extracting a transmission power control bit from a signal received from a distant station;

the apparatus having a communication state detecting step which detects one or more of: a change in the reception power of the received signal obtained by comparing a previous reception power with a current reception power, ~~the level variation cycle of the received signal due to fading,~~ and the current transmission power of the distant station and/or said apparatus, and a change in the transmission power control bit;

the apparatus having a transmission power control step range changing step which internally changes a variable power step amount of a transmission power control step based on both the transmission power control bit and the detected one or more of: the change in the reception power of the received signal obtained by comparing the previous reception power with the current reception power, ~~the level variation cycle of the received signal due to fading,~~ the current transmission power of the distant station, and the current transmission power of said apparatus; and

said apparatus internally increasing or decreasing a transmission power of a signal transmitted to the distant station by the changed power step amount.

Claim 23 (currently amended): A transmission power control method for a radio communications apparatus for controlling a transmission power of the apparatus, said method comprising:

the apparatus having a transmission power control bit extraction step for extracting a transmission power control bit from a signal received from a distant station;

the apparatus having a communication state detecting step which detects one or more of: a change in the reception power of the received signal obtained by comparing a previous reception power with a current reception power, ~~the level variation cycle of the received signal due to fading,~~ and a change in the transmission power control bit;

the apparatus having a transmission power control step range changing step which internally changes a variable power step amount of a transmission power control step based on both the transmission power control bit and the detected one or more of: the change in the reception power of the received signal obtained by comparing the previous reception power with the current reception power, ~~and the level variation cycle of the received signal due to fading;~~ and

said apparatus internally increasing or decreasing a transmission power of a signal transmitted to the distant station by the changed power step amount.

Claim 24 (currently amendment): A radio communications apparatus having a transmission power control feature for controlling the transmission power of said apparatus, said apparatus comprising:

a transmission power control bit change detector for extracting a transmission power control bit from a signal received from a distant station;

a communication state detector for detecting ~~one or both of:~~ a change in the reception power of the received signal obtained by comparing a previous reception power with a current reception power, ~~and a level variation cycle of the received signal due to fading;~~ and

a transmission power control step range changer for internally changing a variable power step amount of a transmission power control step based on both the transmission power control bit and the detected ~~one or both of:~~ the change in the reception power of the received signal obtained by comparing the previous reception power with the current reception power, ~~and the level variation cycle of the received signal due to fading;~~ wherein

said apparatus internally increases or decreases a transmission power of a transmitted signal to the distant station by the changed power step amount in response to the transmission power control bit received from the distant station.

Claim 25 (new): A radio communications apparatus having a transmission power control feature for controlling the transmission power of said apparatus, said apparatus comprising:

a transmission power control bit change detector for extracting a transmission power control bit from a signal received from a distant station;

a communication state detector for detecting a change in the reception power of the received signal obtained by comparing a previous reception power with a current reception power; and

a transmission power control step range changer for internally changing a variable power step amount of a transmission power control step based on the detected change in the reception power of the received signal obtained by comparing the previous reception power with the current reception power; wherein

said apparatus internally increases or decreases a transmission power of a transmitted signal to the distant station by the changed power step amount in response to the transmission power control bit received from the distant station.